In the Office Action of April 17, 2008, the Examiner objected to the claims and rejected claims 1-26. Claims 1-26 are currently pending. Applicant has amended claims 1 and 14 and added new claims 81-87. Based on the following remarks, Applicants respectfully request reconsideration of the Application.

Objection to the Claims

Examiner objected to claims 1, 2 and 3 for lack of antecedent basis. In particular, the Examiner indicated that "the data" and "the destination network interface" in claim 1 and the destination processing element in claims 1, 2 and 3 lack antecedent basis.

Applicant submits that proper antecedent basis for "data" is provided in line 7 of claim 1, wherein the claim recites "in a source processing element, writing data to the transmit buffer." Applicant has amended claim 1 to correct antecedent basis for "destination network interface" and "destination processing element," and thanks the Examiner for catching these typographical errors. Based on the amendments to claim 1, Applicant submits that objection to the claims is now moot and requests the objection be withdrawn.

Rejection under 35 U.S.C. §103 in view of *Isfeld, Hagsand and Deri*

The Examiner rejected claims 1-6, 8-10, 12-19, 21-23 and 25-26 under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 5,828,835 (*Isfeld*) in view of United States Patent No. 7,254,142 (*Hagsand*) and United States Patent No. 5,943,150 (*Deri*). Because the claimed embodiments of claims 1-6, 8-10, 12-19, 21-23 and 25-26 are not obvious in view of *Isfeld, Hagsand* and *Deri*, Applicants respectfully requests the rejection be withdrawn.

Among other limitations, claim 1 recites:

> **generating a channel that has bandwidth requirements** and is uni-directional from a source processing node to a destination processing node, **wherein**

the channel is generated **based on a physical description of the array of processing nodes, the source processing node and destination processing node contained within the array of processor nodes;**

Isfeld does not disclose the embodiment of claim 1. *Isfeld* discloses a system for providing connectionless transmitting of messages. A transmit system transmits messages without establishing a connection. (col. 2, lines 4-8 and 36) Before transmittal, the messages are classified and queued based on the classification. (col. 2, lines 38-40) Classifications based on latency and reliability are used to place messages in one of two queues, and priority rules are used to determine which messages to send from the two queues. (col. 2, lines 55-65)

In particular, *Isfeld* does not disclose "generating a channel that has a bandwidth requirement." (Office Action page 3, second paragraph)

Hagsand does not cure the deficiencies of *Isfeld* with respect to the embodiment of claim 1. *Hagsand* discloses a system for dynamically updating a bandwidth resource for a connection based on observed traffic and allocated bandwidth. After a connection is made, the traffic communicated through the connection is measured, and the actual bandwidth is measured. (col. 3, lines 11-15 and 42-57) If the allocated bandwidth is less than the measured bandwidth during the connection, the allocated bandwidth is increased. (col. 4, lines 17-24)

Hagsand does not disclose "generating a channel that has bandwidth requirements" wherein the channel is "unidirectional" and from a source processing node to a destination processing node "contained within the array of processor nodes" as recited in claim 1. Unlike the claimed embodiment, *Hagsand* discloses establishing a channel over a broadband network architecture, such as that involving a wireless router. (col. 2, lines 13-18) The system of *Hagsand* does not disclose "generating a channel" between nodes that are part of an "array of processor nodes." Rather, the connections in *Hagsand* are broadcast connections between receivers and transmitters not part of any array.

Hagsand also does not disclose generating a channel "based on a physical description of the array of processing nodes" as recited in claim 1. Because *Hagsand* does not disclose an array of nodes or taking parameter in consideration during the "generation" of a channel, Hagsand does not disclose generating a channel based on a "physical description of the array of processing nodes" as in claim 1.

Deri does not cure the deficiencies of *Isfeld* and *Hagsand* with respect to the embodiment of claim 1. *Deri* describes a system for separating and routing local and express data with nodes connected by fiber optic cables. (Abstract) In discussing prior art, *Deri* references a document which discloses duplex pairs of unidirectional channels as well as separate transmit and receive unidirectional channels. (col. 3, lines 1-11)

Deri does not disclose "generating a channel" wherein the channel is "generated based on a physical description" of an "array of processing nodes" that contain the source processing node and destination processing node as recited in claim 1. *Deri* does not disclose an array of processing nodes, generating a channel, nor taking anything into consideration when generating a channel. Therefore, *Deri* fails to disclose "generating a channel" based on a "physical description of the array of processing nodes" as in claim 1.

Furthermore, one skilled in the art would not find it obvious to try to combine *Isfeld*, *Hagsand* and *Deri* because their communication protocols are not compatible. *Isfeld* and *Hagsand* relate to broadcast connection-less channels, where a signal is transmitted from a source without having any information regarding any receivers that may or may not receive the signal. **Unlike *Isfeld* and *Hagsand*, *Deri* is related to fiber optic channels having protocol and other control messaging.** Connectionless channel broadcasting protocols and inter-node fiber optic channel communication protocols will not work together. In fact, Isfeld even differentiates between nodes connected by high speed connections and connectionless protocols, indicating that connectionless protocol systems do not have the amount of control messages as distributed processing nodes connected by high speed means. (Isfeld, col. 2, lines 4-6) Thus, it would not be obvious to try to combine the system

of *Isfeld* with the systems of *Hagsand* and *Deri* because those skilled in the art would understand that the protocols disclosed in the different references would not work together.

Because *Isfeld*, *Hagsand*, and *Deri* do not disclose or make obvious the elements of claim 1, both in combination and considered individually, claim 1 should be allowed. Claims 2-6, 8-10 and 13 depend from claim 1 and incorporate the elements of claim 1 in addition to the patentably distinguishing limitations they recite. Therefore, claims 2-6, 8-10 and 13 are not obvious over the cited reference for at least the same reasons as claim 1 and should also be allowed.

Claim 14 contains elements that distinguish the claimed embodiment from *Isfeld* and *Hagsand*, and *Deri* similar and in addition to those recited in claim 1. Therefore, claim 14 should be allowed for at least the same reasons as claim 1. Claims 15-19, 21-23 and 25-26 depend from claim 14 and incorporate the elements of claim 14 in addition to the patentably distinguishing limitations they recite. Therefore, claims 15-19, 21-23 and 25-26 are not obvious over the cited reference for at least the same reasons as claim 14 and should also be allowed.

<u>Rejection under 35 U.S.C. §103 in view of *Isfeld* and *Plante*</u>

The Examiner rejected claims 7 and 20 under 35 U.S.C. §103(a) as being unpatentable over *Isfeld* in view of United States Patent Publication No. 2004/0208602 (*Plante*). Because the combination of *Isfeld* and *Plante* fails to disclose or make obvious each limitation of claims 7 and 20, Applicants respectfully traverse this rejection.

As discussed above, *Isfeld* fails to disclose or make obvious each element of claims 1 or 14. *Plante* fails to cure the deficiencies of *Isfeld* with respect to claims 1 or 14. *Plante* discloses a free space optical communications system that resists atmospheric attenuation of optical beams. (Abstract) *Plante* does not disclose or make obvious "an array of channels" or "generating a channel" as recited in claims 1 and 14 on which claims 7 and 20 depend. Claims 7 and 20 which depend on claims 1 and 14, respectively, are also not disclosed or obvious in view of *Isfeld* and *Plante* and should be allowed.

<u>Rejection under 35 U.S.C. §103 in view of *Isfeld* and *Pitts*</u>

The Examiner rejected claims 11 and 24 under 35 U.S.C. §103(a) as being unpatentable over *Isfeld* in view of United States Patent No. 6,505,241 (*Pitts*). Because the combination of *Isfeld* and *Pitts* fails to disclose or make obvious each limitation of claims 7 and 20, Applicants respectfully traverse this rejection.

As discussed above, *Isfeld* fails to disclose or make obvious each element of claims 1 or 14. *Pitts* fails to cure the deficiencies of *Isfeld* with respect to claims 1 or 14. *Pitts* discloses a network infrastructure cache that provides proxy services to a plurality of client workstations concurrently requesting access to data stored on a server. (Abstract) *Pitts* does not disclose or make obvious "an array of channels" or "generating a channel" as recited in claims 1 and 14 on which claims 7 and 20 depend. Claims 11 and 24 which depend on claims 1 and 14, respectively, are also not disclosed or obvious in view of *Isfeld* and *Pitts* and should be allowed.

<u>New Claims</u>

Applicant has added new claims 81-87 which are not disclosed or obvious in view of the cited art. No new matter is added by the new claims. Applicant respectfully submits that new claims 81-87 be allowed.

Conclusion

Based on the foregoing remarks, Applicants believe the objections to the claims and the rejections to the claims have been overcome, and that the pending and new claims in the present Application are in condition for allowance. If the Examiner has any questions regarding the case, the Examiner is invited to contact Applicants' undersigned representative.

Respectfully submitted,

Date: August 18, 2007   By: /Steve Bachmann/
                                 Steve Bachmann, Reg. No. 50,806
                                 Carr & Ferrell LLP
                                 2200 Geng Road
                                 Palo Alto, CA 94303
                                 Phone: (650) 812-3400
                                 Fax: (650) 812-3444